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UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

1962-1963 ANNUAL REPORT

PRIEST RIVER EXPERIMENTAL FOREST

PRIEST RIVER, IDAHO

By

Robert D. Pfister, Superintendent

Intermountain Forest and Range Experiment Station
U. S. Department of Agriculture, Forest Service

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Intermountain Forest & Range Experiment Station
Forest Service
Ogden, Utah 84403

1380
January 25, 1965

Glenn H. Deitschman, Moscow

Charles A. Wellner, Chief
Division of Forest Disease &
Timber Management Research
Reports

Thank you for Pfister's reports on the Priest River Experimental Forest. They are very well done and he is to be complimented on them.

A record of activities on the experimental forests is important and needed. Yet I believe we should pick and choose carefully so that we do what is needed yet do not put more effort into these reports than is necessary. I have the feeling that Bob may be putting more effort on this job than is justified.

This is not a criticism of the reports; they are very good. It is a suggestion that we need to make our time and efforts as effective as possible in producing research results.

Dictated by Mr. Wellner
and signed in his absence
to avoid delay.

CHARLES A. WELLNER

CAWellner:ls

Purchase

OPTIONAL FORM NO. 10
5010-104

UNITED STATES GOVERNMENT

Memorandum

Intermountain Forest & Range Experiment Station
Forestry Sciences Laboratory
P. O. Box 469, Moscow, Idaho

1380

TO : C. A. Wellner, Chief
Div. Forest Disease & Timber Management Research

DATE: January 18, 1965

TMK
Title

FROM : G. H. Deitschman, Project Leader

SUBJECT: Reports

Enclosed for your information and files are a copy of (1) the 1962-1963 Annual Report for the Priest River Experimental Forest and (2) summary memoranda and illustrative photos of 1962-1964 APW work there. Separate copies of the latter memoranda are also enclosed for Station administrative files.

G H Deitschman

FOREST SERVICE
RECEIVED
JAN 1965
RESEARCH
INTERMOUNTAIN

Chuck:

1/22/65

I think Priest should be complimented on these two reports. They represent a lot of effort, well done.

I was especially pleased to see the report on the APW work

I have retained the xerox copy of the letter, will have a folder-cover made for it, and send it to Thompson for our APW record file.

Geo

1962-1963 ANNUAL REPORT

PRIEST RIVER EXPERIMENTAL FOREST

PRIEST RIVER, IDAHO

By

Robert D. Pfister, Superintendent

Intermountain Forest and Range Experiment Station
U. S. Department of Agriculture, Forest Service

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1962-1963 ANNUAL REPORT

PRIEST RIVER EXPERIMENTAL FOREST

The years 1962 and 1963 witnessed considerable activity and many changes at Priest River Experimental Forest. Research projects in practically all divisions were active during the period. Renovations of the administrative site and other improvements on the forest were made possible through a $90,000 Accelerated Public Works appropriation.

The following report summarizes the activities during the 51st and 52nd year of operation.

RESEARCH ACTIVITIES

TIMBER MANAGEMENT RESEARCH

Growth and yield

Plot 148, on Fox Creek Knoll, was remeasured by Glenn Deitschman in 1962. Plot 151 at the head of Benton Creek was maintained by Robert Doty in 1962. These plots were established in 1922 and 1928, respectively, to study growth and follow succession in overmature white pine stands.

Pre-commercial thinning

Plots 155 and 157-161 in Benton Creek were remeasured by Glenn Deitschman in 1963. These plots were established in 1933 in a 75-year-old overstocked stand to test various degrees of thinning.

Vigor quality outplantings

Plot 212 was measured and maintained by B. V. Barnes in 1962 and J. W. Hanover in 1963. This plot was established from 1955 to 1959 by planting overrun seedlings from the blister-rust resistance program. One purpose of this study is to determine the heritability of vigor and quality traits. Two progenies of eastern-western white pine hybrids are also included.

Lodgepole pine-Jack pine hybrids

Plot 199 was remeasured by Jim Lotan in 1962. This is part of a series of field tests to determine if the hybrid is (1) suited to the climate and soils of the area, and (2) superior to native lodgepole pine.

FOREST DISEASE RESEARCH

Pole blight

Three plots were established in 1955 and 1956 to determine if pole blight symptoms could be induced by: (1) preventing summer precipitation, or (2) preventing all precipitation from occurring on the plots. Ed Wicker maintained these plots and collected soil moisture samples in 1962 and 1963.

Dwarfmistletoe

Ed Wicker continued work on the field plot established in 1961 to study host specificity and age susceptibility of dwarfmistletoe on several tree species. The plots was examined in the springs of 1962 and 1963 to determine amount of dwarfmistletoe seed removal by snow and amount of successful infections. Seedlings were reinoculated each fall with several species and varieties of dwarfmistletoe seed.

Armillaria mellea

Jerry Koenigs continued work on the cedar release plots (180 and 181). Roots were sampled in 1962 to determine rootlet density in the released and non-released plots. Dr. Richard Smith, Pacific Southwest Forest and Range Experiment Station, and Orson Miller, conducted a field examination of root disease fungi, with emphasis on Armillaria mellea, in 1963.

Echinodontium tinctorium

Orson Miller trapped spores and collected sporophores occurring on grand fir trees in April 1962. Spores were germinated in various media under laboratory conditions. Results of the study have been published.[1/]

1/ Miller, Orson K. 1962. Sporulation, germination, and early growth of Echinodontium tinctorium. Plant Disease Reporter 46: 576-578.

Mycorrhizal and wood-rotting fungi

In 1962 and 1963, Orson Miller spent several days at Priest River collecting, identifying, and isolating mycorrhizal and wood-rotting fungi. In October 1963, Dr. Jack Rogers, Forest Pathologist, Washington State University, accompanied Miller on a collection trip and tour of forest disease problem areas in northern Idaho. One article has been published to date which includes information on species collected at Priest River.[2/]

[2/] Miller, Orson K. 1964. Monograph of Chroogomphus (Gomphidiaceae). Mycology 56: 526-549.

Seedling studies

In 1962, Jerry Koenigs established an experimental nursery at Priest River to provide seedlings for antibiotics research. Koenigs also inoculated selected seedlings with suspected disease producing fungi to establish their pathogenicity. Diseased material was also sampled for isolation of pathogens.

FOREST FIRE RESEARCH

Fire spread study

During the period May 8-18, 1962, Art Brackebusch, Bob Mutch, Dick Barney, and Ernie Breuer prepared slash fuel beds for later study under a National Science Foundation grant covering mechanisms of fire spread. Eighteen plots of Douglas-fir and lodgepole pine logging slash were prepared. These plots were instrumented and burned experimentally between July 23 and August 3, 1962 (fig. 1). Personnel conducting the burning included: Brackebusch, Mutch, Barney, Beaufait, Anderson, Rothermel, and Breuer, all from the Northern Forest Fire Laboratory; and Dr. E. Roy Tinney from Washington State University who was a cooperator on the National Science Foundation fire spread study. Detailed measurements were made of wind, temperatures, and flame characteristics while the fires were in progress. Falls Ranger Station provided standby fire protection.

These investigations of 6- by 60-foot fuel beds indicated that heavier fuel loadings increased the rate of spread. However, air velocity was a more significant factor than loading on rate of spread. Fire intensities were correlated by relating length to the BTU/min/unit length of fireline front. Additional results reflect analyses of fuel bed characteristics, buoyant diffusion flame characteristics, and convection column velocities.

Fuel collection

Brackebusch, Mutch, and Barney visited the forest in May 1963, on a fuel collection trip. Mutch returned to the forest in June and August collecting western white pine needles for laboratory rate-of-spread studies and fuels for a heat-of-combustion study.

Figure 1.--Experimental slash burning at Priest River Experimental Forest - 1962

FOREST INSECT RESEARCH

Mountain pine beetle

(Dendroctonus ponderosae - monticolae)- Dick Schmitz, Missoula, spent most of July and August, 1963, at Priest River Experimental Foresty studying the mountain pine beetle in second-growth stands. The objectives of this study were to investigate the incidence, infestation pattern, and associated insects of the beetle in white pine stands less than 120 years old. Seven infested trees were selected for detailed study.

Douglas-fir beetle

(Dendroctonus pseudotsugae)- Malcolm Furniss spent a week on the forest in 1963 examining possible areas for study of the Douglas-fir bark beetle. During his trip, Furniss collected a new species of Diptera (Lonchea reidi) associated with Dendroctonus ponderosae. This was subsequently described by McAlpine.[3/]

3/ McAlpine, J. F. 1964. Descriptions of new Lonchaeidae. Canadian Entomologist 96: 701-757.

WATERSHED MANAGEMENT RESEARCH

In July, 1963, Harold Haupt and Otis Copeland inspected the Benton Creek watershed to evaluate its suitability for research studies. Bill Shambo and Milo Coons flushed out the gauging dam pond in September. Harold Haupt and Ed Burroughs measured the ground profile behind the dam later in September. Future measurements of the profile will reveal the amount of sedimentation as affected by proposed roadbuilding and logging in Benton Creek. Sediment samples will also be taken at periodic intervals beginning in the spring of 1964.

FOREST INFLUENCES

Control Weather Station

Continuous weather records have been maintained at this station since 1912. The records are the most complete of any forested area in Idaho. These records have been used for a dendroclimatological study of western white pine in relation to pole blight incidence. Part of these data were also used for a report on moisture stress in relation to growth and weather. [4/] These weather data are being recorded on

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[4/] Zahner, Robert, and Albert R. Stage. A procedure for calculating daily moisture stress and its utility in regressions of growth on weather. (Prepared for publication in Ecology.)

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punched cards at the University of Idaho. Such records are being used to study the probability distribution of precipitation. The value of these weather records for research correlations is immeasurable and will continue to be of increasing importance.

Weekly and monthly weather records were provided for the Priest River Times as usual during 1962 and 1963. A summary for the two years and "normal" figures are presented in table 1. A 50-year summary (1912-1961) of these weather records was compiled by Robert Doty.[5/]

[5/] Doty, Robert D. Fifty year summary (1912-1961) of climatological data at Priest River Experimental Forest. (File report, unpublished.)

Table 1.--Weather summary for 1962 and 1963 (control station)

Month	Precipitation			Temperature					
				Average Maximum			Average Minimum		
	Normal*	1962	1963	Normal*	1962	1963	Normal*	1962	1963
	- - - -	-inches-	- - - -	- - - - -	- F° - -	- - -	- - - - -	- F° - -	- - -
Jan	4.02	2.42	1.40	30.3	28.1	26.5	16.6	12.1	14.8
Feb	3.09	1.85	3.43	36.9	36.4	41.0	18.3	20.7	25.3
March	2.65	3.36	3.25	45.3	42.2	47.7	23.5	23.1	27.3
April	2.00	1.82	3.02	57.6	60.9	56.1	29.6	30.2	31.1
May	2.18	4.67	2.03	66.7	62.4	67.4	36.6	37.7	35.9
June	2.27	0.60	2.93	73.5	74.0	73.0	42.5	41.1	45.5
July	0.89	0.44	1.20	83.1	81.6	77.6	45.5	43.0	45.5
Aug	1.04	0.99	0.43	80.2	78.2	83.9	43.4	44.7	45.6
Sept	1.67	2.92	1.26	70.9	74.2	78.8	37.8	37.0	42.3
Oct	2.96	3.04	2.45	56.6	54.7	60.5	32.1	34.8	34.7
Nov	3.76	6.71	6.11	39.6	42.1	40.7	26.7	31.6	29.6
Dec	4.37	3.89	2.71	32.5	35.2	31.0	21.1	27.9	22.6
Annual	30.90	32.71	30.22	56.2	55.8	57.0	31.0	32.0	33.4

*Normal reflects 50-year average (1912-1961)

Fire Weather Station

Continuous fire-weather records have been maintained during the May-October fire season since the mid-1920's. This was the first fire-weather station in the United States and continuous, reliable data have been collected since its establishment.

The early fire research by Gisborne, Hayes, and others was based partially on these data. Weather observations have been correlated with moisture content change in the large-log study. The most recent use for these fire-weather data was to provide a partial basis for converting from the Model 8 Danger Rating System to the National Danger Rating System.

The severity of the 1962 fire season ran slightly above normal in 1962, but dropped much below normal in 1963 (fig. 2).

Benton Creek Streamflow

Records of Benton Creek runoff, continuous since 1938, were maintained in 1962 and 1963. Additional use will now be made of these data and future data with the advent of commercial timber sales in the Benton Creek drainage. Springflow measurements were taken monthly at Benton Spring.

Precipitation

Precipitation records were maintained year long at the following locations: (1) control weather station; (2) Benton Dam; (3) end of Benton Creek road; and (4) Benton Spring. All are recording rain gages (serviced weekly) except the monthly storage gage at Benton Spring. The Benton Dam records are used to compute hourly precipitation for publication by the U. S. Weather Bureau. Monthly precipitation at three of these stations for 1962 and 1963 is presented in table 2.

Snow Course

In cooperation with the Soil Conservation Service, and with the assistance of the Kaniksu National Forest, Benton Spring and Benton Meadow snow courses were measured monthly from January through June in 1962 and 1963. The resulting data are presented in table 3.

Soil Moisture and Temperature Measurements

Soil moisture and temperature readings were made monthly at Benton Spring. This information was forwarded to the Soil Conservation Service.

Figure 2.--Forest fire seasonal severity - Priest River Experimental Forest

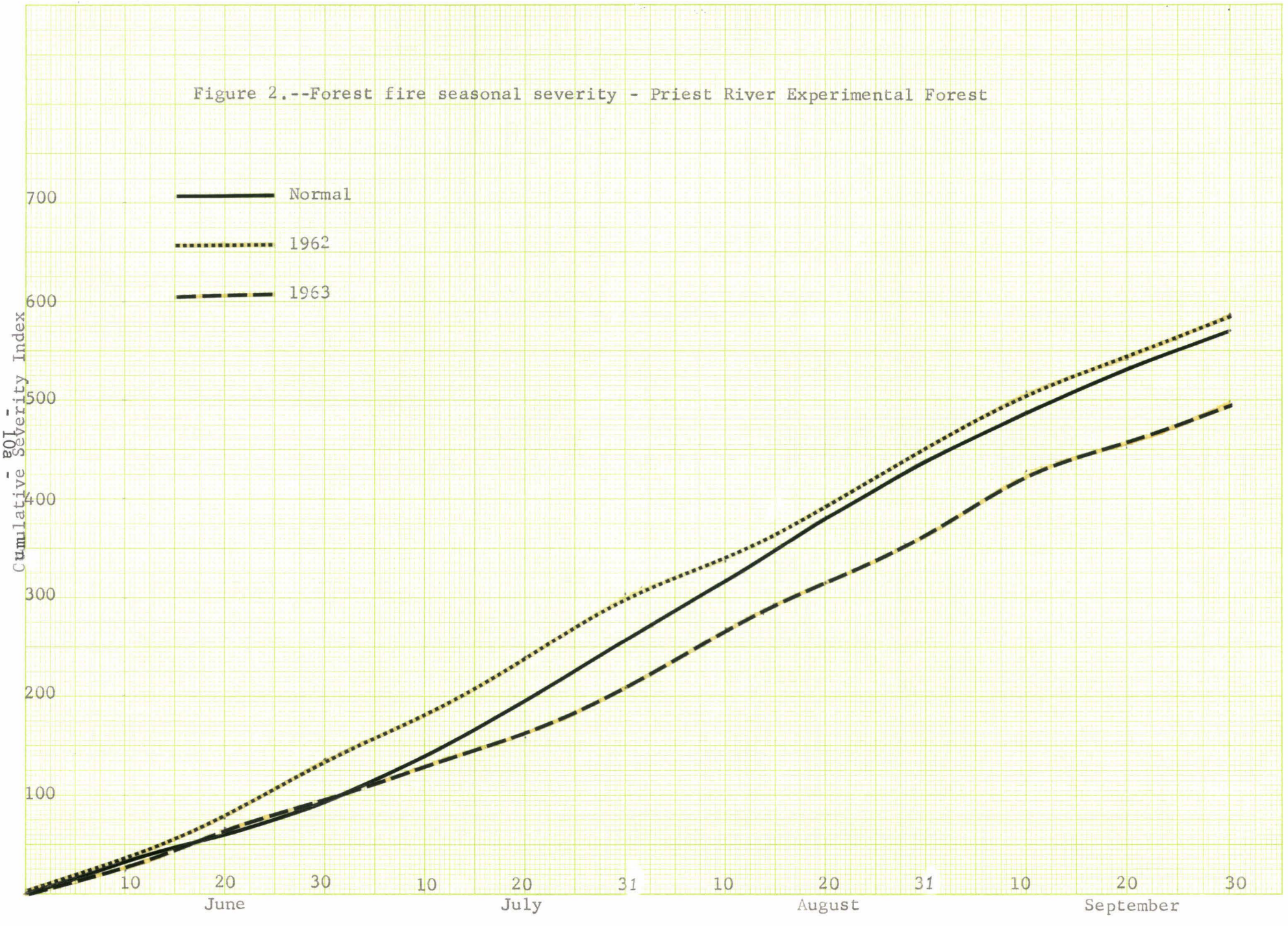

Table 2.--Monthly precipitation at three stations on Benton Creek - 1962-1963

Month	Control (elev. 2344')			Benton Dam (elev. 2640')			Benton Spring (elev. 4700')		
	Normal*	1962	1963	Normal*	1962	1963	Normal*	1962	1963
	inches								
Jan	2.63	2.42	1.40	2.94	2.60	2.00	2.89	2.43	2.23
Feb	3.39	1.85	3.43	3.59	2.04	3.58	3.68	1.93	2.39
Mar	3.37	3.36	3.25	3.68	3.85	3.41	4.09	4.42	1.92
Apr	2.31	1.82	3.02	2.43	1.61	2.88	2.88	1.52	4.75
May	3.83	4.67	2.03	3.90	4.53	2.22	4.92	4.86	2.61
June	1.51	0.60	2.93	1.61	0.65	3.07	1.92	0.67	3.24
July	0.64	0.44	1.20	0.65	0.36	0.98	0.62	0.53	1.04
Aug	1.02	0.99	0.43	0.98	0.84	0.41	1.36	1.14	0.78
Sept	1.54	2.92	1.26	1.41	2.40	0.88	1.52	2.49	1.36
Oct	3.12	3.04	2.45	2.93	3.02	2.04	3.14	3.29	2.12
Nov	5.99	6.71	6.11	6.26	6.74	6.44	6.15	5.82	6.24
Dec	3.72	3.89	2.71	4.19	4.29	3.00	4.19	4.73	3.03
Annual	33.07	32.71	30.22	34.57	32.93	30.91	37.36	33.83	31.71

*Based on 4-year average (1960-1963), because Benton Spring rain gage records began in 1960.

Table 3.--Snow depth and water content, 1962-1963

Month	Normal*		1962		1963	
	Snow depth	Water content	Snow depth	Water content	Snow depth	Water content
	inches					
Benton Meadow (Elev. 2344')						
January 1	12.0	2.7	26	6.0	0	0.0
February 1	19.4	4.8	26	6.6	9	1.0
March 1	19.3	6.0	18	6.5	1	0.4
April 1	6.2	2.3	11	4.3	0	0.0
May 1	0.0	0.0	0	0.0	0	0.0
Benton Spring (Elev. 4775')						
January 1	30.9	8.4	45	12.8	23	5.9
February 1	46.8	13.7	48	15.6	30	7.8
March 1	55.3	18.4	51	17.2	24	7.8
April 1	55.6	20.4	62	21.4	26	8.8
May 1	34.0	14.8	30	12.0	19	7.8

*Based on 27-year average (1937-1963)

ADMINISTRATIVE ACTIVITIES

ACCELERATED PUBLIC WORKS PROGRAM

APW funds financed considerable construction and improvements of administrative and transportation facilities at Priest River Experimental Forest. An original allocation (Phase I) of $60,000 was made available in November 1962 followed by a second allocation (Phase II) of $30,000 in January 1963. Major projects included a new water and sewer system, electrical and heating system renovation, and road construction. A summary of planned and actual expenditures is presented in table 4. Reports have been prepared and filed for each project, and a summary report of the APW program has also been filed. Some of the specific accomplishments are described in the sections that follow in this report.

FOREST ROADS

An up-to-date road map for the experimental forest was prepared by Bill Shambo in 1963 (fig. 3).

New Construction

One mile of road G was constructed with APW funds in the fall of 1962 (fig. 3). Details are in a file report. The work was done by the Kaniksu National Forest under force account. The remainder of road G is surveyed and will be completed as appropriated funds are made available.

Reconstruction and Maintenance

Road A-1 and part of A were reconstructed with APW funds in the spring of 1963 (fig. 3). Details are in a file report. Grant Vess, District Engineer, supervised the force-account crew from Falls Ranger Station. The main access roads were maintained by Falls Ranger Station during 1962 and 1963.

Planned Construction

Roads M-8, M-9, and part of proposed roads L-2, L-3, L-4, and L-5 were located in 1963 and will be built in 1965 as part of the Benton Creek Sale (fig. 3).

PRIEST RIVER EXPERIMENTAL FOREST

KANIKSU NATIONAL FOREST
IDAHO

SCALE
0 ¼ ½ ¾ 1 MILE

R. 4 W.

R. 3 W.

T. 58 N.

T. [illegible] N.

Roads

- New Construction
- Re-construction
- Planned Construction (Benton Creek Sale)

Benton Creek Sale 11-18-63

- Clearcut
- Sanitation - Salvage

Compiled from 1914 Priest River Experiment Station survey, D.R. Brewster in charge, and additio 1933-34 Priest River Experimental Forest surve George M. Fisher, chief of party
Corrected - March, 1940
Feb 28, 1950, May 2, 1950
Feb. 6 1951 Oct 17, 1963

Figure 3.--Road construction and timber sale activity on Priest River Experimental Forest.

Table 4.--Summary of expenditures

Name of Project	Expenditures	
	Planned	Actual
Contracts		
Drilling well	$ 3,000	$ 3,506
Water and sewer systems	40,000	36,358
Electrical system - rewiring	3,000	3,860
Roofs for office and lodge	2,000	2,964
Heating systems	4,000	5,379
Shop foundation repair	2,000	1,094
Force Account		
Road construction - 597-6	24,000	22,362
Road surfacing - 597-N7	1,000	-
Road reconstruction - 597-A, A1	2,500	3,338
Building for fire behavior plots	2,000	2,137
Fencing " " " "	400	399
Land clearing (fire behavior plots and administrative site)	2,000	1,911
Maintenance of buildings	3,100	5,553
Miscellaneous		
(R.O. and Kaniksu overhead, inspections, etc.)	1,000	1,035
	$90,000	$89,896

TIMBER SALES

Salvage Sale - 5/17/62 - Roy Turnbull

This sale was made to salvage scattered blowdown and insect-killed trees on the experimental forest. Following is a breakdown of material removed and values:

Species	M.B.M.	Stumpage	Value	Slash	Total
Western White Pine	19.05	$ 7.50	$142.88	$38.10	$180.98
Ponderosa Pine	3.81	2.00	7.62	7.62	15.24
Larch - Douglas-fir	41.16	1.00	41.19	41.19	82.38
Hemlock - Grand fir	3.05	1.00	3.05	3.05	6.10
Totals	67.07		$194.74	$89.96	$284.70

Tree Removal Sale -(Lower Benton Creek) - 2/4/63 - Les Erdman

This sale was made to remove trees from the power line right-of-way leading to the reservoir, along the entrance road, and around the station buildings. Following is a breakdown of materials removed and values:

Species	M.B.M.	Stumpage	Value	Slash	Total
WWP - PP	33.50	$10.00	$335.00	-	$335.00
L - DF - S - C	22.77	2.50	56.92	-	56.92
H - 6F	1.18	2.00	2.36	-	2.36
LPP (pulpwood)	13.79(equiv)	1.00	13.79	-	13.79
Totals	61.24		$408.07		$408.07

Post Sales

Cliff Ring - 3/1/62 and 7/6/62

The operator removed 3,000 posts from dead and decadent cedar from the NE¼ of Sec. 23, T58N, R4W.

James Nacarrato - 5/26/62

The operator removed 5,363 posts from dead and decadent cedar from the SW¼ of NE¼, Sec. 27, T58N, R4W.

Gene Mickelson - 5/26/62

The operator removed 110 posts from dead and decadent cedar from the SW¼ of SE¼, Sec. 27, T58N, R4W.

Summary

Operator	No. Posts	Stumpage	Slash	Total
Ring	3,000	$30.00	$30.00	$ 60.00
Nacarrato	5,363	53.63	53.63	107.26
Mickelson	110	1.10	1.10	2.20
			Total	$169.46

Post sales have been curtailed and are not encouraged in the near future. Increased research use and demand for undisturbed study areas requires that post cutting be eliminated or restricted to postlogging clean-up operations.

Benton Creek - 11/18/63 - Hedlund Lumber Company

This timber sale was made to clearcut and regenerate overmature timber on 170 acres, thus providing areas for regeneration experiments and the establishment of young stands for future research material. Insect-infested and deteriorating timber in adjacent areas will also be removed (fig. 3). Spot reconstruction is required on 7.4 miles of main access road and 3.0 miles of new road will be built to 12' truck-way standards.

Estimated volume and bid stumpage rates are as follows:

Species	M.B.M.	Stumpage	Slash
WWP	1,150	$26.85	$1.15
L - DF	1,000	12.80	1.15
Spruce	240	9.10	1.15
Cedar	700	8.30	1.15
H - GF - AF	1,100	12.85	1.15
Total	4,190		

Cedar poles	Lineal ft.		
20-25'	345	.01	-
30-35'	2,970	.04	.02
40-50'	6,750	.10	.02
55-65'	1,800	.16	.02
70+ '	1,050	.28	.02
Total	12,915		

IMPROVEMENT AND MAINTENANCE

The APW program provided the opportunity to install many needed improvements and catch up on needed maintenance of the physical plant. Details of the projects have been written up in file reports but the major accomplishments are listed here.

Water and Sewer Systems

A new well was drilled in the fall of 1962. The water and sewer systems were installed during the summer of 1963. The water system included a 21,600-gallon reservoir, distribution lines, and a submersible well pump with complete electrical service and controls. The sewer system consists of collection lines, manholes, cleanouts, and a sewage lagoon.

Electrical System

A renovation of all electrical systems was made in 1963. Panels were replaced in most buildings and rewiring was done where necessary to make all systems meet current standards of safety.

Heating Systems

The existing wood-fired systems were converted to complete oil-fired systems in the four cottages and office during 1963. Conversion burners were installed in the hot water systems of the office and lodge. Cottages 2, 3, and 4 were equipped with complete forced-air systems.

New Building

A new portable bunkhouse, 12'x24', was installed near the fire behavior plots in 1963. This building will be used to facilitate instrumentation for studies on behavior of fire under exacting conditions.

Aluminum Roofing

New aluminum shingle roofs were installed on the office and cottage #1 roofs in 1963 (fig. 4). These roofs should provide excellent protection as well as facilitate easy snow removal.

Fence Construction

The fence around the fire behavior plots was relocated and rebuilt. The gate was moved adjacent to the main road for better control of access to this area.

Land Treatment

The fire behavior study area was cleared and leveled with a D-7 and cultivated with a disk and drage to provide uniform, level conditions.

Many trees around the administration site were removed to provide more daylight in the residence area.

Figure 4.--Office building with new aluminum roof.

General Building Maintenance

A condition survey of the buildings was made by R. D. Pfister in January 1963 and a maintenance record form was prepared. This form will be used to keep a convenient record of all major interior and exterior maintenance work. A brief summary of the work done in 1962 and 1963 by buildings is as follows:

Office.-- Log-oil siding; exterior trim painted; new ceiling in SE office and all upstairs rooms; sanded and refinished floors on main floor except SE office; cleaned and varnished floors in SE office, stairs, and all upstairs except laboratory and weighing room; installed tile floors in lab and weighing room; painted walls in all upstairs rooms; built cabinets and work bench in NW room, 2nd floor; and refinished work bench tops in laboratory and on three desks.

Shop.--Foundation replacement under the east one-third of building was contracted for; log-oil on siding; painted exterior trim; installed replacement sliding doors.

Bunkhouse-Messhall.--Log-oil on siding; exterior trim painted; repainted roof and flashing around chimney; applied roof stain; repaired and painted ceiling and walls in west dormitory room; painted ceiling in dining room.

Cottage #1 (Lodge).--Painted exterior trim; installed new ceiling and painted walls in dining room.

Cottage #3.--Installed new tile on kitchen and bathroom floors; cleaned and varnished living room floor; painted walls in living room.

Cottage #4.--The roof was stained; a new formica countertop and a stainless steel sink were installed; kitchen cabinets were painted; new linoleum was installed in the kitchen and porch; all wood floors were cleaned and varnished; the walls, ceilings, and trim were painted in all rooms except the kitchen.

Other Buildings.--The trim was painted on the woodshed and gas house. The roof was stained on the woodshed and on the garage by Cottage #4.

PERSONNEL

Personnel in residence

The personnel situation was far from static during 1962 and 1963 as evidenced by the following list:

Position	Dates	Names
Superintendent	1-1-62 to 6-11-62	R. D. Pfister & family
"	6-11-62 to 9-14-62	R. D. Doty & family
"	9-14-62 to 10-12-62	Phil Gustafson
"	10-12-62 to 6-10-63	R. D. Pfister & family
"	6-10-63 to 10-24-63	Bill Shambo
"	10-24-63 to 12-31-63	Stan Carpenter and wife
Maintenance Man	4-23-62 to 10-27-62	Milo Coons
"	5-20-63 to 10-12-63	Milo Coons
APW - Laborer	11-12-62 to 12-31-62	Milo Coons
APW - Carpenter	11-12-62 to 12-31-62	Geino Pucci
APW - Laborer	3-4-63 to 5-20-63	Milo Coons
" "	4-3-63 to 5-31-63	Clifford Ring
APW Carpenter	3-4-63 to 5-31-63	Bernard Archer

Intermountain Station Personnel

Intermountain Forest and Range Experiment Station personnel who used the experimental forest facilities in 1962 and 1963 are too numerous to list. Excluding personnel headquartered at the experimental forest, station personnel spent 268 mandays on the forest in 1962 and 143 mandays in 1963.

INSPECTIONS

June 8, 1962 - Inspection of control weather station and Benton Dam precipitation gage by Howard Kappes, USWB, Boise.

June 27, 1962 - Inspection of fire weather station by Robert R. Peterson, USWB, Missoula.

July 22, 1962 - General Functional Inspection by Carl Ostrom and Franklin Liming (WO), Joe Pechanec and Chuck Wellner (Ogden), and Glenn Deitschman (Spokane).

June, 1963 - Inspection of Control weather station and Benton Dam precipitation gage by Howard Kappes, USWB, Boise.

June, 1963 - Inspection of fire weather station by Robert R. Peterson, USWB, Missoual.

OFFICIAL VISITORS

Many groups and individuals used the experimental forest during 1962 and 1963. Following is a chronological listing of visitors who used the forest for research or educational purposes: (Intermountain Station personnel conducting research are not included.)

Dates (1962)	Visitors	Purpose of Visit
Feb. 19 & 24	Prof. O. B. Howell, Montana State University, and 60 students	Used arboretum as dendrology field exercise.
May 26-27	Dr. R. F Daubenmire, Washington State University, & 8 students in Field Ecology class.	Field observation of ecological communities and principles..
July 9-17	Sam Evans, NFA-TM, Missoula, and family.	Mr. Evans & family resided at PREF while making a TM inspection on Kaniksu NF.
July 18-20	Prof. John Howe, University of Idaho, and family.	Prof. Howe was looking at the pole blight study areas to determine possibilities of a study on the effect of moisture restriction on wood properties.
July 26, 27, 31 August 2	Dr. E. Roy Tinney, Washington State University, and family.	Dr. Tinney was observing the fire behavior study in relation to his laboratory work on the same subject.
August 15-17	Prof. & Mrs. Robert R. Rhodes	Tour of forest types in western U. S.
August 21-23	Dr. Chi-Wu Wang, University of Idaho, and assistants.	Collecting data from Plot 162 (Racial variations in ponderosa pine) for determination of variation in wood properties.
August 28	Vic Sandberg and H. F. Johnson, NFA, Missoula	Checking facilities for youth camp possibilities.
September 27	Coeur d'Alene and Kaniksu NF joint Ranger's meeting.	Tour of experimental studies on the experimental forest.
December 8	Dr. Chi-Wu Wang, University of Idaho and Forest Genetics Class.	Field trip to ponderosa pine racial variation plot.

Dates (1963)	Visitors	Purpose of Visit
May 25	Dr. R. F. Daubenmire, Washington State University, & 17 students in Field Ecology class.	Field observation of ecological communities and principles.
August 14-15	Miroslar Harapin, Mirko Ivanovich, and Milan Piskernik, Yugoslavian Foresters.	Tour of forestry problems and practices in the U. S.
September 18-20	Dr. Richard Smith, USFS, Pacific Southwest Station.	Field examination of root disease fungi.
October 25-26	Dr. Jack Rogers, Washington State University.	Tour of forest disease problem areas in northern Idaho.

COOPERATION

Considerable technical assistance was provided by National Forest Administration during 1962 and 1963. The Regional Office and the Kaniksu National Forest took responsibility for administration of the APW program including surveying, preparation of contracts and administration of contracts. Falls Ranger Station maintained experimental forest roads, administered timber sales, and provided assistance for measurement of the Benton Spring Snow Course.